



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,832	01/31/2001	Robert J. McCarty JR.	CS-3	6255
7590	10/14/2004		EXAMINER CHANG, EDITH M	
Daniel R. Brown P.O. Box 821130 Fort Worth, TX 76182-1130			ART UNIT 2637	PAPER NUMBER

DATE MAILED: 10/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/774,832

Applicant(s)

MCCARTY, ROBERT J.

Examiner

Edith M Chang

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments/Remarks

1. Applicant's arguments, filed on July 26 2004, with respect to the rejection(s) of claim(s) under Shull et al. have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Critchlow (US 5,282,226).

Information Disclosure Statement

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. Therefore, the reference, W.T. Webb and L. Hanzo, Modern Quadrature Amplitude Modulation, IEEE Press, 1994, chapter 3, pp. 80-93, listed on page 13 lines 23-25 has not been considered.

Specification

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

Art Unit: 2637

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05).
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825).

Content of Specification

- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.

Add the information of co-pending US patent applications listed on page 10 lines 14-18 (or on page 13 lines 3-5) and on page 19 lines 8-12, serial number 09/295,660 now US patent 6,252,910 and serial number 09/302,078 now US patent 6,628,728, under the section of Cross-References to Related applications of the specification.

4. The disclosure is objected to because of the following informalities: On page 18 line 11, the term "at." should be "art."

Appropriate correction is required.

Art Unit: 2637

Claim Objections

5. Claims 2-3, 8-10 are objected to because of the following informalities:

Claims 2-3 & 8, line 2: "said ramp data field" is suggested changing to "said first ramp data field".

Claim 9, lines 2-3: "said ramp data field" is suggested changing to "said first ramp data field".

Claim 10, line 4: "said coefficients" is suggested changing to "said coefficients selected to minimize energy".

Appropriate corrections are required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 5 and 6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claim 5 is a single mean claim. A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was

Art Unit: 2637

held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

Claim 6 is directly dependent on the rejected claim 5.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11 and 12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claim comprising calculating the energy, taking a partial derivative of the energy, writing an equality by setting the partial derivative to zero and solving the equality. It claims an algorithm, which is a non-statutory subject matter.

Claim 12 is directly dependent on the rejected claim 11.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2637

10. Claims 1-2, 4, 7-8 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Critchlow (US 5,282,226).

Regarding claims 1-2, 4, 7-8 & 10, Critchlow discloses the system and its method in FIG.3 comprising a filter (element 26) and the controller (elements 30 and 36) coupled to the filter to reduce output energy/bandwidth of the output of the filter (column 2 line 64-column 3 line 10). In FIG.2 (R is the ramp field), FIG.10 and FIG.11, Critchlow teaches the ramp data fields (RAMP UP and RAMP DOWN are two ramp data fields) having adjacent data fields, wherein the DATA next to R in FIG.10 is the data field, the next adjacent six symbols of the RAMP UP and RAMP DOWN fields in FIG.11 are the first data field and second data field (symbols next to the ramp symbol field up to and including the eighth symbol are adjacent data) that passing through the eight tap filter to output the symbols in the ramp field as show in the FIG.9. Therefore Critchlow calculates the ramp data fields based on the data fields in the filter multiplied with the filter coefficients (FIG.5, FIG.9, FIG.11 and column 7 lines 1-15) to minimize the energy in a truncated tail of the filter (FIG.11) wherein the filter coefficients in the ramp down are the mirror of the ramp up (FIG.6).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2637

12. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Critchlow (US 5,282,226) in view of Walczak et al. (US 5,621,763).

Regarding claims 3 & 9, Critchlow does not explicitly specify to window the filter, however Walczak et al. teaches windowing the ramp data field pass through the filter in FIG.4 portion 417 and column 5 lines 40-47 wherein the SQRC function is used to quickly ramp the filter. Walczak et al.'s SQRC provided to minimize the output energy of the filter truncated tails, therefore at the time of the invention, it would have been obvious to a person of ordinary skill in the art to have the window taught by Walczak et al. implemented in the FIR of Critchlow's system to shape the transition for the purpose of minimizing the output power level (column 5 lines 45-50).

Conclusion

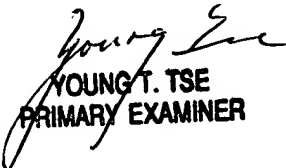
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edith M Chang whose telephone number is 571-272-3041. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayanti Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2637

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edith Chang
October 7, 2004


YOUNG T. TSE
PRIMARY EXAMINER